

Formal Matters

Applicant notes that the cover sheet of the final Office Action dated December 31, 2003 indicates that this Office Action is in response to a communication filed on August 30, 2001. This is clearly an error, since the content of the final Office Action responds to the Amendment filed October 8, 2002. However, the final Office Action does not provide an indication of consideration and approval of the Proposed Drawing Correction (new Figs. 11A-11C) filed October 8, 2002 concurrently with the October 8, 2003 Amendment. Applicant respectfully requests the Examiner to acknowledge receipt of, and approve, the Proposed Drawing Correction filed October 8, 2002, so that the Applicant may prepare and submit a formal drawing of Figs. 11A-11C accordingly.

Also, Applicant respectfully requests the Examiner to acknowledge the receipt of the Information Disclosure Statement (IDS) filed January 15, 2003, consider the references submitted therewith, and return initialed form PTO-1449 accordingly.

Next, Applicant notes that claims 5 and 6 depend from the allowed claim 4, and therefore, are in condition for immediate allowance.

Finally, the Examiner does not reject claims 21 and 22 over the prior art of record. Instead, the Examiner alleges that these are product-by-process claims, and cites MPEP 2113 for the proposition that “applicant has the burden of proof” to show patentability of such claims. Assuming, *arguendo*, that claims 21 and 22 are product-by-process claims, MPEP 2113 makes it clear that it is only after a 35 U.S.C. § 102 or 103 rejection is made, that the burden shifts to the applicant to show an unobvious difference. Here, the Examiner made no such rejection of claims

21 and 22. That is, the initial “burden of proof” is on the Examiner to show that the chemical polished surface as recited in claims 21 and 22 is “substantially identical” to a corresponding surface in a prior art device. Since no such showing has been made, claims 21 and 22 should be allowable.

Prior Art Rejections

Applicant respectfully traverses the rejections of claims 1-3, 7-10, 13-15 and 23-25 as follows.

Applicant’s independent claims 1 and 23 define semiconductor devices comprising unique combinations of features, including, *inter alia*, a metal plate having a first main surface joined to lead terminals and a second main surface opposed to the first main surface. The second main surface is roughened to have a plurality of recesses, which are filled with a molding resin sealing a semiconductor chip (as explained in Applicant’s Amendment filed October 8, 2002). None of the prior art references discloses, teaches or suggests such unique combinations of features.

Williams shows a metal plate 460, which connects a semiconductor chip 462 with a lead 470. The Examiner acknowledges that Williams does not disclose or suggest that its metal plate 460 has a roughened surface. However, the Examiner alleges that Seki supplies this acknowledged deficiency of Williams by describing a roughened metal plate 255.

Seki discloses a stacked layer structure 255 which appears to have a roughened surface as shown in Fig. 48B, 49B and 50B. However, Figures 48B, 49B and 50B are illustrations of an

intermediate condition of the surface of layer structure 255. In particular, Seki describes an etching step for removing the unwanted layers 256, 257 and 258, such that the metal plate 255 is rendered smooth (see Seki, Fig. 51B and column 35, line 3 through column 38, line 64). Moreover, the structure 255 is not a metal plate for connecting a semiconductor chip and a lead (see Seki, Fig 47A).

Thus, Seki fails to teach or suggest a metal plate having a roughened surface filled with a molding resin, as defined in Applicant's claim 1. Likewise, Seki fails to teach or suggest a surface which is subjected to a treatment that enhances adhesion strength between a metal plate and a molding plate, as defined in Applicant's claim 23.

Kuraishi does not supply the above-noted deficiencies of Williams and Seki.

Accordingly, Applicant's independent claims 1 and 23, as well as the dependent claims 2, 3, 7-10, 13-15, 21, 22, 24 and 25 (which incorporate all the novel and unobvious features of their respective base claims) would not have been obvious from any reasonable combination of Williams, Seki and Kuraishi at least for these reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

Applicant submits herewith a Petition (with fee) for an Extension of Time (two months).

The USPTO is directed and authorized to charge any additional required fees, except for the

Response Under 37 C.F.R. § 1.116
U.S. Appln No. 09/941,744

Atty Dkt No. Q64096

Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any
overpayments to said Deposit Account.

Respectfully submitted,



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